

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A chemical liquid processing apparatus for processing a substrate using chemical liquid, comprising:

- a substrate holding portion for holding a substrate;
- a chemical liquid [spouting] nozzle disposed on said substrate holding portion for supplying chemical liquid onto a substrate held by said substrate holding portion so as to form a chemical liquid film on the substrate; and
- a gas supply portion for [forming] generating [air] a gas flow which contacts [with] the surface of said chemical liquid film so as to [form] generate a flow of chemical liquid on the surface of the chemical liquid film.

2. (Currently Amended) A chemical liquid processing apparatus for processing a substrate using chemical liquid, comprising:

- a substrate holding portion for holding a substrate;
- a plate disposed above said substrate holding portion and having [an] a vertically extending air intake [hole going through vertically];
- [an air] a flow control wall installed so as to surround said substrate holding portion and for preventing air around the substrate holding portion from being sucked; and

a rotating mechanism for rotating said plate,

wherein

[the] a side face of said substrate holding portion has an invertedly-inclined gradient,

the top face of said [air] flow control wall [has] having a gradient substantially parallel to the gradient of the side face of said substrate holding portion, and

a negative pressure is generated between the plate and the substrate held by the substrate holding portion by [a] rotation of said plate,

and [air] a gas flow [is] being generated between said substrate and said plate by sucking air through said air intake hole.

3.-23. (Canceled)

24. (New) The chemical liquid processing apparatus according to claim 1, wherein the gas supply portion generates the gas flow so as to prevent the chemical liquid film being removed from the substrate.

25. (New) The chemical liquid processing apparatus according to claim 24, wherein the gas supply portion supplies flow generation gas above the substrate so as to generate the gas flow.

26. (New) The chemical liquid processing apparatus according to claim 25, wherein the flow generation gas is an inert gas.

27. (New) The chemical liquid processing apparatus according to claim 25, wherein the flow generation gas contains any one of ozone, oxygen and hydrogen.

28. (New) The chemical liquid processing apparatus according to claim 1, wherein the flow of the chemical liquid is generated in a de-carbonized environment.

29. (New) The chemical liquid processing apparatus according to claim 1, wherein the substrate is rotated when generating the flow of the chemical liquid.

30. (New) The chemical liquid processing apparatus according to claim 29 wherein the substrate is rotated continuously.

31. (New) The chemical liquid processing apparatus according to claim 29, wherein the substrate is rotated intermittently.

32. (New) The chemical liquid processing apparatus according to claim 29, wherein the substrate is rotated in a direction coinciding with the direction of the gas flow.

33. (New) The chemical liquid processing method according to claim 2, wherein the negative pressure is controlled by changing at least one of a rotation speed, acceleration of the plate, and a distance between the substrate and the plate.

34. (New) The chemical liquid processing method according to claim 33, wherein the negative pressure is controlled depending on the amount of the chemical liquid on the substrate.

35. (New) The chemical liquid processing method according to claim 2, wherein the diameter of an opening of the air intake hole in the center of the plate is changed during rotation of the plate.

36. (New) The chemical liquid processing method according to claim 2, wherein the plate is rotated with a gap between the plate and liquid.

37. (New) The chemical liquid processing method according to claim 2, wherein the plate is moved downward from above the substrate so as to bring the plate into contact with liquid on the substrate, and the plate is rotated when liquid is in contact with the plate.

38. (New) The chemical liquid processing method according to claim 37, wherein the plate is pressed to the liquid so as to eliminate an air gap between the substrate and the plate in bringing the liquid into contact with the plate.

39. (New) The chemical liquid processing method according to claim 38, wherein a liquid contacting surface of the plate is subjected to one of hydrophilic treatment and porosity processing indicating an effect of air suction due to capillary phenomenon.

40. (New) The chemical liquid processing method according to claim 38, wherein a liquid contacting surface of the plate is subjected to water repellent treatment.

41. (New) The chemical liquid processing method according to claim 2, wherein the gas flow directed from an outer edge of the substrate to the center of the substrate is eliminated by generating the gas flow directed from below the substrate holding portion to a location which is outside and above the substrate holding portion on an outer peripheral portion of the substrate.